

said assembly not disposed concentrically of said first axis and for at least substantially counterbalancing forces to which said pad is exposed during use as a result of its engaging with a work surface characterized in that said counterbalance means includes first and second masses carried by said head portion to project in generally opposite directions radially of said first axis, said first and second masses being arranged such that they are not bisected by said plane, and said first and second masses are spaced apart lengthwise of said first axis.

18. A method of balancing a random orbital machine having drive means rotatable about a first axis, an abrasive pad supported for rotation about a second axis disposed parallel to said first axis and orbital movement about said first axis and intended to have an operating surface disposed in operative engagement with a work surface during use, said first and second axis being within a common plane, said machine having a given torque versus speed curve, said method comprising the steps of determining at predetermined working condition of said machine by operating said machine under a load with said operating surface engaged with said work surface to produce a desired work surface finishing result, measuring the rotational speed of said drive means under said working condition, using the measured rotational speed to determine torque from said torque versus speed curve, dividing said determined torque by the radial distance between said first and second axes to obtain the value of a drag force, and using said rotational speed and said drag force to determine the location and sizes of first and second masses adapted to essentially balance said machine under said predetermined operating condition, wherein said first and second masses are spaced apart lengthwise and project radially of said first axis and are not bisected by said plane.

#### Remarks

In the Office Action, the Examiner cited U.S. Patent 4,729,194 (the '194 Patent) in rejecting the originally presented claims 1-16.

By the present amendment, claims 1-16 are withdrawn and replaced by independent product and method claims 17 and 18 in an effort to reduce the issues involved and to more clearly define Applicant's invention over the '194 Patent.